DOCUMENT RESUME

ED 319 947 CE 054 899

AUTHOR	Bujea, Eleanor
TITLE	Business Education Practices and Trends: A Literature Review. SIDRU Research Report No. 4.
INSTITUTION	Regina Univ. (Saskatchewan). Saskatchewan Instructional Development and Research Unit.
SPONS AGENCY	Saskatchewan Dept. of Education, Regina.
REPORT NO	ISBN-0-7731-0110-1
PUB DATE	May 87
NOTE	57p.
AVAILABLE FROM	Saskatchewan Instructional Development and Research Unit, Faculty of Education, University of Regina, Regina, Saskatchewan S4S 0A2 ($10.00 plus $1.50 postage and handling; 5 or more: 10% discount).
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Academically Gifted; Accounting; Business Communication; *Business Education; Business Education Teachers; Business Skills; Computer Assisted Instruction; Computer Literacy; Consumer Education; *Cooperative Programs; Curriculum Development; Disabilities; Economics Education; Educational Trends; Education Work Relationship; Elementary Secondary Education; Foreign Countries; *Inservice Teacher Education; Keyboarding (Data Entry); Law Related Education; Marketing; Postsecondary Education; *School Business Relationship; Technology Transfer; Work Experience Programs
IDENTIFIERS	Canada; Great Britain; United States

ABSTRACT

The findings of a literature review of business education in Great Britain, the United States, and Canada were as follows: business education will be in greater demand in the high school and it will be extended downward into the elementary school and upward into the postsecondary institutes, especially in the areas of keyboarding and computer literacy; in the subjects of law, economics, marketing, accounting, and consumer education, the content taught needs to be business oriented and it must be taught by individuals qualified in the field of business; computer-assisted instruction (CAI) is extending into all subject areas and should be used as an aid to instruction, with equipment available to business education teachers; business teachers should be involved in inservice education in keyboarding and computer literacy for all teachers, including administrators and consultants; the business education curriculum should be flexible and continuously updated to accommodate new technologies, changing content, and the dynamic nature of business; and teachers of business subjects should have up-to-date industry experience, with cooperative business experience available as inservice education for business teachers. (The document includes 64 references and 52 recommendations in the areas of keyboarding, shorthand, machine transcription, computer literacy, economics, communications, computer applications, work experience, attitudes, handicapped, gifted, curriculum and curriculum development, and teacher development.) (CML)

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ED319947

BUSINESS EDUCATION PRACTICES AND TRENDS: A Literature Review

Researcher/Writer:
Eleanor Bujea, Ph.D.

SIDRU Research Report No. 4
May 1987

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BUSINESS EDUCATION PRACTICES AND TRENDS: A LITERATURE REVIEW

Prepared for the
Saskatchewan Instructional Development
and
Research Unit

With Funding from the
Saskatchewan Department of Education

by
Eleanor Bujea, Ph.D.
April 1987

Published 1987 by the Saskatchewan Instructional Development and Research Unit with funding assistance from Saskatchewan Department of Education. Publication does not constitute endorsement of the findings or opinions by either of these agencies.

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ISBN: 0-7731-0110-1

SIDRU Research Report No. 4

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Introduction

This paper is part of a contract between the Saskatchewan Instructional Development and Research Unit and Saskatchewan Education. One of the purposes of this project is to provide assistance to Saskatchewan educators responsible for the delivery of information to students of business and other subjects. The information directly or indirectly contributes to the preparation of young people preparing for entry into the business community on completion of their formal schooling. This information is aimed at providing assistance and support to the educators in their plans to improve teaching and offerings provided by their schools in dynamic technologically influenced times and a rapidly changing society.

Literature relating to the practices and trends of business education in Great Britain, the United States of America and Canada has been reviewed and the findings are recorded here. Materials used for this project were obtained through the University of Regina and its Interlibrary Loan Service. Textbooks in Education generally deal with philosophy of education, educational psychology, and current methodologies reflecting present-day and past practices for classroom use. Very little information was found in

textbooks relating to the future trends in business education. Therefore, most of the information was obtained from journals and periodicals printed in Great Britain, the United States of America and Canada. Recommendations made in this paper relate to the findings and the implications for business teachers in all levels of education with emphasis on secondary education. The appendices contain additional excerpts pertaining to the review.

Use of Terms

Commercial Education

When business subjects were first offered in Saskatchewan, they were frequently referred to as "commercial subjects". In Canada, because the offerings were broadened and more related to skills and knowledge required in business, the term was changed to Business Education in the 1970s. The term "Commercial Education" was just recently changed in Great Britain to "Business Education". Commercial Education is still the term being used in British schools that have a heavy emphasis on economics.

Business Education

The term "Business Education" has been used in the United States for many years. Business teachers in Canada were concerned that the term "Commercial Education" was too restrictive; they succeeded in having the term "Business Education" adopted. This term more accurately represents the

larger variety of courses offered in the school system. Business courses added to the school curriculum since the 1950s include Office Procedures, General Business, Business Communications, Word Processing, Marketing, Data Processing and Computer Applications.

Today, business education is understood to be education for business. While business education has been basically taught in the secondary institutions, the need for courses like "Keyboarding" and "Elementary Word Processing" is bringing these aspects of business education into the primary and elementary schools.

Review of the Literature

This paper addresses the teaching of business subjects. There is evidence in the literature published in Great Britain, the United States of America and Canada that there have been changes in methodologies to better suit the content of business subjects offered in today's schools.

Some of the notable changes are in the area previously known as "Typewriting". The change in "typewriting" was made from the manual typewriter to the electric typewriter, to the electronic typewriter, to the word processor and now to the computer keyboard. As a result, there has been a subject course title change from "Typewriting" to "Keyboarding". "Word processing" was introduced on the electronic typewriter but is rapidly moving, by way of software applications, to the microcomputer.

The influx of computer software applications in business education resulted in their use in the areas of Business Communications, Accounting, Transcription of machine dictation, Office Automation as is evident in word processing and electronic mail, computer case studies in Marketing, Law and Economics. The use of the computer in teaching business subjects has just begun. Many more changes are in the offing as software and courseware are developed.

Many of the articles on business education pertained to the use of microcomputers in all subject areas and at all levels of education. Microelectronics is having an influence on the present day curricula. Its influence on the future is, to a great extent, unpredictable. What is known is that the change is imminent and children and adults must prepare themselves for it. In 1981 Fothergill (1) from Great Britain stated:

> "If you were to be in any school in five years' time, you should find children learning about and being prepared to live in a society in which devices and systems based on micro-electronics and associated technologies were commonplace and pervasive, and where these technologies may have altered and be altering the relationships between people, and between individuals and their work...the curriculum of the school will have been amended in general terms, in the content of individual disciplines and by the development of new subjects. At the same time, the methods of teaching and learning will naturally incorporate the use of new devices such as the computer, with more stress on self-instructional learning and information retrieval. For those children with physical handicaps, new devices will be used to help them adjust to their environment while those with mental handicaps will be encouraged and

> supported by many computer programs and other learning systems based on the new technologies."

Fothergill pin-points the need for a change in the devices used in education, the relationships between people, the change required in the school curricula and the change in educating children who deviate from the norm due to physical or mental handicaps.

Practices in Business Education

In education, "...school curricula occupy a critical point of interchange between past and future. They are part of a conversation, a dialogue between generations and traditions in which yesterday's truths and tomorrow's potentials contribute in equal measure to a better understanding of curriculum tasks in the present." (2) Departments of education of the provinces of Canada provide teachers with printed curriculum guides to which they must adhere. In reviewing these guides in Business Education, we note that Nova Scotia includes Introduction to Word Processing (1983) and Data Processing (Draft Outline--1984 which includes BASIC--for students who completed the business education program). Newfoundland and Prince Edward Island did not indicate any current changes in the business education curriculum; New Brunswick indicated their courses were

reviewed but none of them were removed or replaced. Quebec stated that a new curriculum guide was produced but is not available at this time. Alberta has a completely new set of guides published in 1986-87 which include Computer Processing 10, 20, 30, Computer Literacy 10 and Word Processing 30. The Northwest Territories follow Alberta's curriculum. Manitoba offers a course in Routines and Computer Applications. Some computing is offered in the Office Procedures 302 course. The business education curriculum guides for British Columbia were not available to us at this time.

Kitson (3), Editor of Business Education published in Great Britain, writes that "there are two major types of educational philosophy: on the one hand, the 'banking' concept, on the other, 'problem-posing'...The banking concept is fundamentally narrative; the teacher narrates to a patiently listening group of students; the reality communicated is motionless, static, compartmentalized and predictable. Students become passive containers in which the teacher deposits his or her knowledge, which is to be memorized and repeated...Problem-posing education encourages constructive dialogue between teacher and student, a partnership. Both parties have responsibility for the process in which each can grow." He believes that students should "actually do things instead of being lectured at, in which students have an active and not passive role". In his opinion, the formal education received by most business

studies teachers "prepared them for a role as bankers, depositing, controlling, and evaluating the process unilaterally." He states that, because of the lack of experience in business the "contribution of business education to the ossification of British business has been enormous. The greatest barrier to change is the teaching profession itself."

Kitson goes on to state that business teachers need a renewal of business experience. "Awareness of current trends and developments in business is a vital part of the weaponry of an effective teacher of business studies, just as it is for any other teacher in his/her own field." However he concludes: "Good teachers, with or without industrial experience, keep up to date."

Many school systems in several countries have attempted to provide a broader education to students of all abilities and to children of all minority groups. What were academic and technical school programs were merged and changed to become the programs for composite schools and with additional changes became programs for comprehensive schools. The Policies Commission for Business and Economic Education (4) issued a statement regarding the purposes of the comprehensive high school. They are to provide:

1. A sound general education for all students as citizens in a democracy.
2. Elective programs for students to develop useful knowledge, skills, and attitudes.

3. Preparation for students who will seek further education.

The Commission states that it is the responsibility of business educators to help all high school students develop business, economic and computer literacy; to provide needed leadership experiences; through student organizations to provide occupational preparation; to provide courses which should be accepted as meeting specific general education high school graduation requirements and to provide courses which should be recognized as appropriate electives for college-bound students.

The Commission (4) also states that the goals of business education are to educate students for and about business, to provide nonbusiness students with opportunities to acquire business knowledge, skills, and attitudes needed in a career; to help students make intelligent socioeconomic decisions as citizens; to produce and distribute goods and services as workers and consumers. Schooling must provide career information which will help students relate their interests, needs and abilities to occupational opportunities.

Simon (5), a British educator, believes that "comprehensive schools must cater for all students, whatever their gender, ethnic and class differences. All need assistance to develop not only the basic skills in literacy and numeracy but also to gain access to that selection from our culture which holds the key to knowledge and so to

autonomous and effective action and living in the contemporary world...The challenge to educators...is to locate core curriculum analysis in terms, not just of areas of experience, but of learning processes and the type of learning environments which may best sustain these processes. When we argue for a common core we are not arguing for the imposition of the same curriculum for everyone either in the system as a whole or within individual schools. We are arguing that all should have access to knowledge, culture and skills all require in contemporary society." Simon argues that if students are left free to adapt to "local circumstances and interests" it will reinforce learning. By being "left free", students are provided with relevant, real-life experience, enabling them to adapt schooling to real work.

An article in the Forum for the Discussion of New Trends in Education (6), a British Journal, addresses the comprehensive school as a design to break down the dichotomy of "two strands" of education, the academic and the practical/vocational. "Is it to be more concerned with personal development or with national--even local--job needs and opportunities?" Chitty (7) states that "whatever form the differentiated curriculum takes in the fourth and fifth years...it seems quite obvious that the rejects of the system are pretty disenchanted with their schooling." The students need more meaningful experiences.

The British comprehensive school has incorporated "core" subjects. However, Hull (8) states that "the vast majority of schools include only Mathematics, English, Physical Education and less often Religious Education and careers in teaching within the 'core'."

Kitson (3) reports that in England there are several government initiatives designed to improve the young for working life, to provide the young with a more "constructive alternative, and to develop better opportunities for retraining for new occupations and for technological developments." There is concern that social and financial pressures for an "upward academic drift" will reduce the resources to help those whom "this country needs most." He infers that those young people whom the country needs most are leaving school because they are not offered the practical business studies courses which will suit them for a career in business. These young people are of varying abilities both in business and nonbusiness programs.

McKechan (9), another English writer states that "schools that see one of their main goals as helping their children to cope with change may be attracted to the computer as another way to break down the barriers between the school as an institution and the world outside." The computer cannot be viewed as just a "superficial change" as some viewed the introduction of the overhead projector. The full potential of the computer as it affects business subjects

will not come about until the teaching staff has time to prepare, explore and "reflect on the technology itself and the ideas it contains."(3)

One of the changes which has taken place in the past five years is the interest in "information." Herring (10) states that "...teachers have seen the term 'information technology as laying stress on technology--computer programming, systems design, robotics--or on CAL programs for use in a wide variety of subjects in school...Much information in the future--on leisure, employment, and social benefits--will be computerised and success or failure in these areas may depend on the individual's ability to ask the right questions of the expert systems they will face i.e. how good their information skills are."

Stainton-Skinn (11) states that "It should be a major aim to give <u>all</u> students, whether business or secretarial, an appreciation of technological developments and their implications." Further to this, he is concerned that little is being done in the preparation of staff to handle the influx of the new technology and to develop new programs. Several British writers state that the skill subjects of typewriting and shorthand will have less dominance in the business education and commercial curriculum.

Work experience has been part of the business education curriculum in England for at least five years. In 1982, Eggleston (12) stated that "work itself, the newest subject

in the curriculum" became part of the curriculum when pre-occupational training was needed in business and industry but was unavailable in the school system. He believes "the present-day economic and social systems compel schools to take an active role in the achievement of work identity and the provision of experience in which it may occur." Much has been written of the need for recent work experience for those staff members charged with the responsibility of preparing students for work in business and in industry. Martin (13) states that "undoubtedly, industry and commerce are anxious to develop ties with schools and colleges. They are prepared also to donate real and tangible benefits. The improvement in careers counselling generally and the introduction of 'A' levels such as Business Studies has done much to cement these amicable arrangements."

NABTE (14) makes recommendations which include student participation in a number of real work activities to give students a broad range of realistic experiences.

Pumfrey and Schofield (15), in a study used to measure career maturity using Crites' Career Maturity Inventory, found that "pupils who undertook work experience scored significantly higher than those who did not on three of the six scales comprising the criterion test." The three criteria were attitudes, self-appraisal and occupational knowledge.

Many studies indicate that the perceptions of the school staff as to the needs of business are not the same as those identified by professional staff in business. Franklin, Rawlings and Crave (16), British authors, write "...a number of professional bodies were beginning to express doubts concerning the value of BEC (Business Education Council) courses and their appropriateness as courses preparatory for work in the professional and business world...these perceived shortcomings can be explained...:

a. teaching staff who designed the courses lacked recent industrial experience;

b. there has been much less than total consultation with the world of work.

c. ...consultation that did take place was insufficient.

There was a strong feeling among (the school) staff that they knew what the needs of industry were and that these had been correctly identified. However, this...appears to be increasingly at odds with the view of professional bodies."

In addressing the topic of Economics in the Business Education Curriculum, Martin (13) criticizes the way it is taught by stating "It is the encouragement of non-business thinking in teaching economics which has made this business tool largely useless, if not destructive to an understanding of business." He quotes Stacey in a letter to The Times 7 September 1981 "Many schools now recognise that to teach in isolation is not only naive but morally unacceptable and that

the more we can do to introduce children to the 'real' world, the better for all concerned."

Watkins (17) reported on a recent experience using 'live' market research studies in management education. "The use of this approach or 'learning by doing' is analysed from specific applications which used the whole process of market research, including computer based methods of data analysis and application to advertising strategy to educate...in an ongoing learning experience."

In a study completed in 1984 in the United States and reported in the Business Education Forum (18) the question was asked: "'Who teaches data processing/computer-related coursework in secondary schools in your state?' Given the choice of business, mathematics, science, or anyone, the responding state directors answered as follows:

Responses	States
business teachers	40
mathematics teachers	24
science teachers	14
anyone	14

Specifically, the 43 state directors indicated the following combinations of backgrounds for the computer teachers in their states.

Who is Teaching Computer Courses?	Number of States
Business, Mathematics, Science, Anyone	9
Business, Mathematics, Science	5
Business, Mathematics, Anyone	2
Business, Anyone	3
Business, Mathematics	8
Business, Anyone	13

Predominantly, the business teacher was involved in teaching the computer-related courses offered in the school systems."

Keyboarding is a term commonly found in most of the business education literature reviewed. Very little reference is made to "typewriting" as such. Keyboarding is taught at all levels of instruction. It is frequently stated that keyboarding is needed to improve literacy in the language arts area and numeracy.

Headley (19) states that keyboarding in the elementary or primary schools needs our immediate attention and that "business teachers must take the initiative in their local school districts to see that students are properly taught this skill...The primary goal should be to develop increasing efficiency in computer keyboarding through learning touch typing...Keyboarding has been at the fifth grade level...the motor skills, reading skills, and general interest and motivation are good at this age. A 15 to 20 hour time frame broken down into 30 minute class periods seemed to be adequate at this level." This was also a finding of a recent unpublished Masters Thesis by Schrader (20) at the University of Regina in 1986.

It was reported in the Business Education Forum(21) that keyboarding should be learned on devices other than typewriters although beginning classes could be equipped with both electric or electronic typewriters and microcomputers. It was frequently stated that typewriting would be obsolete in five to ten years and that, in business, the typewriter as we know it is already obsolete.

Course titles are changing to reflect the newer job titles and tasks performed by office workers as a result of the new technology. Examples include:

Old Course Titles	New Course Titles
Stenography I, II	Sec. Admin. I, II
Clerk Typist I, II	Office Specialist I, II
Survey of Data Processing	Computer Concepts
Survey of DP Applications	Business Computer

In Virginia, business education programs are identified in four occupational clusters: "Accounting and Computing Occupations; Business Data Processing Occupations; General Office and Administrative Support Occupations and Secretarial Word Processing and Administrative Support Occupations." The names of the four groups changed dramatically since the influx of computer technology.

It is also stated that "returning graduates are reporting that they need word processing and computer skills in addition to their secretarial and clerical skills in order to acquire and to advance on their jobs in today's market."(21)

It was reported in the Business Education Forum(22) that "Computer literacy courses and programs offered through business education departments will provide instruction which will enable students to:

- Trace the historical development of information processing.
- Define fundamental computer technology.
- Explain how information is processed by a computer system.
- Describe the impact of computer technology on industry, business, government, and the individual.
- Identify current trends and issues dealing with computer technology.
- Recognize how computers may be used as management tools.
- Select, evaluate, and use appropriate software packages for problem-solving.
- Use a computer for household records management, personal correspondence, and similar home applications.
- Operate the computer keyboard and 10-key pad by touch.
- Write simple programs in BASIC or other appropriate languages."

Studies show that the time students spend on a computer varies from one class period a week to 20 minutes per day. A few researchers believe that the computer should be used by the students to assist learning in most subject areas at all educational levels including primary. Harmon(23) reports the findings of his study as follows: "The business education chairperson indicated that the public school students spend

approximately 60 minutes per week at the microcomputer...The practice of establishing a microcomputer laboratory has been adopted."

He ranks the order of popularity of use of microcomputer applications included in the business curriculum as follows:

1. Word Processing.
2. Keyboarding.
3. Basic Accounting.
4. Office Procedures.
5. Intermediate Accounting.
6. Personal Word Processing.
7. Records Management.
8. Payroll.
9. Taxes.
10. Inventory.

Studies have been conducted in order to determine what computing background teachers have and where they received their training. Harmon (23) reports that, in rank order, the business teachers stated they received their computing background through: workshops or seminars, college courses in using microcomputers, pre- or in-service training, individual instruction from another microcomputer user, and professional meetings on microcomputers. Some indicated that they had received no training.

Harmon states that, to meet the technological changes taking place in business, American schools are incorporating the use of microcomputers into the curricula. They have identified business education as the subject area where the microcomputer is most applicable in the secondary educational area. He also states, "Each year from 1981 to 1983 the number of school districts using microcomputers increased an average of 42.8% per year."

Computerized applications in Accounting have been used to varying extents in Canada and the United States. "The evidence clearly indicates that accredited institutions are more involved than the nonaccredited institutions requiring computerized accounting applications in a wide range of accounting curriculum."(24)

Roberts, as reported by Harmon (23), writes that in Consumer Eucation "students prepare budgets, using the number handling capabilities of the computer...A second example would include secretarial students editing a report using the word processing capabilities of the computer." Roberts concludes that it is mandatory that students be competent in keyboarding to maximize the learner's performance in all subject areas.

Dickey-Olson (25) recommends that business educators work closely with their principals and administrators to keep them informed of the importance of computing technology in business education. She states that they should:

1. Make administrators aware of the importance of a keyboarding course.
2. Sequence a microcomputer course directly after the typing course.
3. Teach the microcomputer course themselves.

In 1983 in Virginia, "The microcomputer has been identified as a primary teaching tool in all business education programs." (21)

On the subject of Keyboarding, Gades (26) found that "...students working on computers are very inefficient if they have not had a keyboarding course...students working on computers prior to completing a keyboarding course will develop improper techniques." The reason business teachers want students to develop proper techniques is to enable students to maxim'ze input speed, improve the results obtained and minimize the time spent on the computer. This saving of time is of major importance when computing equipment is limited in quantity and input time is an important factor.

The emphasis in the schools in the area of computing has changed. Computer Science has reduced in popularity and the use of the computer in other subject areas has increased. Pratt (27) reports that "Computer Studies is now a minority aspect of micro usage. Mathematics, Science, Geography and History are adopting some form of Computer Assisted Learning at remarkable rates. It would appear that no area of the curriculum is immune."

Most studies refer to a lack of teacher interest and/or teacher training in the use of computers. All provinces have identified the lack of training of teachers in the use of computers in education as being a major issue. (28)

A statement made by the Policies Commission for Business and Economic Education (29), in 1980, included computing as one of "the three R's" in education. The statement reads as follows: "Education in the basic skills of reading, writing, and computation is essential for individuals to function effectively in our competitive, democratic society. Application of these basic skills to life situations enhances effective consumership, economic survival, and quality of life. These basic skills are the foundation of economic, vocational, and academic proficiency." Further to this, another author writes, "Business courses, such as business communication, business economics, business management, business mathematics, computer literacy, consumer economics, general business, keyboarding and occupational program sequences contribute greatly to meeting the general education needs of high school students."(4) No mention is made of shorthand or typewriting. There is a strong indication that "business education must be an integral part of a balanced program of study in the comprehensive school."(4)

The Commission states that, with the introduction of the computer in school systems, business education becomes a "must" and that now, by using computers, "many handicapped students can achieve competencies for business employment and should have the opportunity to acquire the knowledge and skills needed to become employable."(30)

Rich (28) reports that the impact of technology on Canadian schools is felt in the secondary schools, the most active users of computers. There has also been some interest and practice in the use of specialized databases as well.

Trends in Business Education

The literature reports changes in business due to technological changes since the Industrial Revolution because of economic need and the expansion of the trade relationships. Schools typically have prepared young people for entry into this rapidly changing business environment. In order for students to maximize benefits from their schooling, it has been necessary for teachers to keep up with the changes in technology, update the curricula and change methodologies to suit the new content. Teachers have been coping with these changes in varying degrees. The good teachers get the additional knowledge and skill and keep up to the changing environment. Some teachers make no attempt to prepare themselves for the change. Others gain experience in the new technologies in a variety of ways. However, it has been necessary for them to apply this knowledge and skill of the new technologies to the business education curricula, sometimes with no assistance from teacher preparation institutes or from the very business that employs the school graduates.

In 1985, Pring (31) reports that, in England,

"The kind of radical challenge embodied in TVEI

> (Technical and Vocational Education Initiative Nov '82) might be summarised as follows: schools need, in the light of wider personal and social developments, to reexamine the educational aims embodied in their curriculum organisation, teaching styles, and subject content. This re-examination must necessarily look at the very way in which we conceptualize 'education' and the transactions that are conducted under its title. Such concepts incorporate distinctions (and thus divisions between people) that are less and less defensible--such concepts and distinctions, for example, as 'vocational/liberal', 'training/education', 'practical/theoretical', and 'process/product'. TVEI...has forced us to reconceptualize processes through which we educate young people. In doing that, it has in many schemes affected teaching styles, found a place for the practical and experiential, reassessed the role of assessment, made us more conscious of equal opportunities, questioned the autonomy of (and lack of co-ordination between) schools and colleges, and given prominence to technology especially as a tool of communication and enquiry."

The two tools, communication and enquiry, are fundamental to business education and the problem-posing and problem-solving nature of the subject. Ruby (32), in his presentation to the American Vocational Association Convention in 1983, states that "leaders in business education need to design a new curriculum to reflect the infusion of the microcomputer." In addition to new course titles and new outlines, there is a need for courseware to incorporate computer-assisted diagnostic, prescriptive instruction and teacher management programs. Retraining of teachers is necessary in the use of microcomputers and appropriate courseware. The NBEA Task Force (33) points out that business educators must be motivated to make business education more relevant to future societal needs. Rigby (34) states that the challenge to business educators is to

initiate keyboarding courses at all levels because everyone needs basic touch keyboarding skills to make efficient use of keyboards in many subject areas.

Lerman (35) of the Connecticut State Department of Education in June, 1982 recommends that secondary business education departments think of interdisciplinary approaches in order to integrate themselves within the school and to provide applications for the principles taught in such courses as English, Mathematics and Social Studies. In these courses touch keyboarding is a vital skill, especially if accessing databases or word processing is required.

In a study completed in 1985, Dauwalder (36) ranks the major challenges facing business education. He states that considerable question exists concerning future directions and challenges in business education. The need for curricular change ranked high in his findings. The first three conclusions he draws follow:

1. Current course offerings need to be made vital and up to date to better meet the needs of students.

2. Expansion into new subject areas, where warranted, and development of specific course offerings and programs to meet the needs of new student populations are both necessary.

3. A better job of recruiting designed to draw both the types of students business education presently serves and those potential students whom business education could serve with an expanding curriculum is important to the success of such programs.

If business teachers are to be successful in implementing the new technology into their programs, it is

important to develop a positive attitude toward the change. Effective in-service programs must be designed to update the skills and knowledge of the business educators. Some business educators have taken workshops/seminars and courses on their own in their summer vacations. School boards should provide released time to speed up the process. Co-operative work experience in business is another way to increase the skills and abilities of business educators. It is a very practical and effective way to accomplish the retraining of in-service business educators. Business, industry and community leaders along with business educators should be active participants in determining the educational objectives and course content for the new and changing environment. These business leaders can also be used as resources in instruction.

Polcyn (37) in writing about the role of communication satellites in education and training in the 1990s predicts that educators in elementary and secondary educational institutions will take little advantage of communication satellites in the 90s because "of all educational institutions, they are the most conservative, most protected and staffed with personnel least prepared of all potential users to take advantage of communication satellites." This may be partially due to the historical fact that for decades the teachers in these two institutions have been required to follow a state or provincial curriculum guide and are given

little opportunity to make innovative and creative changes in it. They have, hence, rigidly followed the guide without concern for its effectiveness in a new and changing environment.

Braun (38) reports that "Seymour Papert of MIT proposes that each child be given a microcomputer on her/his first day of school. His rationale is that, since computers can support a person's creativity and since creativity cannot be turned on or off at will, children should have access to a computer at any time they wish rather than the scheduled 20 minutes per day that is typically available to students in schools with computers."

In writing about the creativity of students in language arts, Braun stated that "educators in the United States have been shocked in recent years to discover that the writing skills of our students have degraded significantly. The word processing systems...that have become available in the past two years offer the promise of alleviating this problem because they are a tool that makes editing and rewriting almost painless." In some schools certain aspects of word processing are taught to ten year olds in the elementary school system. Many studies have proven that children can input through touch keyboarding at a rate of up to 3 times faster than their handwriting rate and can do this accurately and automatically enabling students to input at a rate closer to the rate they create information mentally.

Lees (39) generated some uses for computers in elementary and high school subjects including business education: communication, mobility and environmental control devices, simulations, word processing/administration, databases, computer-based learning, learning about microprocessors, e.g. computer programming, online information systems and computer-assisted learning. The most obvious of these uses is that of word processing applications within the school. Lees also states that "If commercial studies is part of the school curriculum, the use of microtechnology must be regarded as essential if pupils are to be familiar with the routine business tools of word processing and spreadsheet packages."

Hodgson (40) of Britain defines a workstation as including components such as wordprocessing, electronic mail, database systems, character recognition, computing, and video conferencing. He believes that the training and development activities will involve basic familiarity with the equipment, typing and keyboard skills, transfer of information accurately from paper system to electronic system, familiarity with other (previously specialist) work of the office, learning corporate information to aid decision making, emphasizing quality not quantity, helping directors overcome keyboard shyness, learning how to make use of the diary and priority system, learning how to use, organize and retrieve

information for databases, video-conferencing, and learning not to overuse a facility just because it is there.

Bastin (41) of Britain notes that it is universally accepted that business people must communicate with attorneys but is concerned with the quality of that communication. Business schools are educating people who will be purchasing legal services so they need to learn about lawyers. Failure to teach them leads to communication problems. He refers to the American system where students benefit from law programs and Britain will benefit greatly from a consideration of the American empirical research. He states that there is a need for law on the British business studies curriculum. He continues by pointing out that, "if business law teachers are to exploit the opportunities this may afford, they must be prepared to respond to the demands that the business world may make of them. This will require not only greater commitment on their part but also research in order that the nature of those demands may be determined with some degree of accuracy."

In relating to higher education in Great Britain, Wilson commented that "in recent years, with the setting up of bodies such as the Schools Council, the Nuffield Foundation and the National Council for Educational Technology, amongst others, these bodies have made valuable contributions to various aspects of the change process in education," however, "...this only scratches the surface of the idea of planned

change strategies and the use of change agents able to use behavioural science techniques."(42) In 1984, Milloy and Saker (43), also English, write "Today we need to educate minds that are well-informed over a wide range, that are practised in finding and using information in the solution of real problems."

Hurt (44) writes "Business educators have the responsibility to prepare students both for entrance into the work force and for continuing education. Incorporating a unit on the accounting applications of spreadsheets will help both of these objectives." If this is to happen, the accounting classrooms must be equipped with microcomputers.

Curley (45) writes "Word processing begins with keyboarding and computer literacy training, and business educators are especially equipped to handle this training whether it occurs in elementary schools or in executive offices...The changes which must occur include moving business education into the area of elementary education and more extensively into adult education...Application skills are developed only after orientation and keyboarding skills are accomplished."

Headley (19) states that keyboarding can be successfully taught at the fifth grade level with a 15 to 20 hour time frame broken down into 30 minute class periods." This skill should be acquired by touch and before other keyboarding activities are initiated.

The Policies Commission for Business and Economic Education Commission stated "Many handicapped students can achieve competencies for business employment and should have the opportunity to acquire the knowledge and skills needed to become employable."(29)

The Business Education Forum (46) noted that returning graduates are reporting that they need word processing and computer skills in addition to their secretarial and clerical skills in order to acquire and to advance on their jobs in today's market, and that the schools should provide these skills to the student.

Brendel (14) challenges business teacher educators to return to the secondary classroom for "rejuvenated practical experience." He states that the needs of students have changed since the teachers received their education and that a change is now required in the content of business education. The methodologies used to deliver the content must also change. Prospective teachers must learn how to cope with the new content and the technological changes if they are to successfully incorporate them in the business studies program. To reinforce this Jorgensen, as quoted by Harmon (23), predicts in 1986 that, by 1990, 75 out of every 100 workers in the United States will use the computer as part of the day-to-day occupational routine.

Pratt (27) of the University of Bristol recommends "in-service training, not least as a contribution to the

reduction of 'person-dependence' of microprocessor systems and to overcoming user-resistance"; Reilly, as quoted by Pratt, adds the interesting rider that "advisers who are not computer buffs should be given high priority for such (computer) training...The adviser or the head (of the school system) is clearly to be seen as a potential 'user' in the earliest stages, but equally clearly to be seen as an important part of the change agent system at a later stage or in another school."

Regarding work experience Musgrave, as quoted by Eggleston (12), makes the point well in an unpublished paper: "My thesis is that we must stop seeing the link between school and work as the focal relationship. The link is working not perfectly--nothing ever does in a free society--but at least reasonably well, and many existing social forces will force improvement where deficiencies exist. We must begin to redefine work and relate our view of work and of leisure to education, so that we can evolve some policy that is appropriate to the probable economic circumstances at the start of the second millenium."

Oldham and Forrester (47) support the "case method" in teaching business education and state that business students must develop analytical skills, and imaginative approaches to complex problem-solving; the ability to make realistic judgements; and the self-confidence and ability to support their judgements and to persuade others to accept their

view--abilities which are the essence of effective business practice.

Rucker (48) rebukes teachers by stating "The presence of faculty who are less than minimally literate in the use of microcomputing skills and knowledge, together with many others without any computing skills and knowledge, represents a major impediment in expanding the application of the microcomputing technology in business."

An interesting article by McLean (49) of the University of Minnesota lists the actions he feels will need to be taken by teachers in the immediate future to respond to the technological changes which are taking place. These are as follows:

1. Expose students to many changes in routine within the classroom.
2. Develop listening skills.
3. Teach dictating skills.
4. Help students develop voice quality.
5. Develop decision-making skills through case studies and values clarification techniques.
6. Develop skills in worker organization.
7. Teach assertiveness training.
8. Incorporate up-to-date information, teach about career ladders, and discuss the concept of job-sharing.
9. As keyboarding becomes a universal skill, prepare to teach it in the elementary school.
10. Teach keyboarding speed rather than accuracy.

11. Teach for outstanding proofreading and editing skills.

12. Put increasing emphasis on machine transcription skills with less emphasis on shorthand skills.

13. Prepare to teach all students the use and perhaps the programming of microprocessors.

14. Teach and develop organizational skills.

15. Prepare for increasing demands for specialized (thus postsecondary) education.

16. Accept and use increasingly sophisticated teaching aids.

17. Cover economic systems other than traditional capitalism in basic business courses.

18. Anticipate increasing numbers of 'handicapped' students as physical barriers disappear.

19. Use classroom activities requiring the development of logic systems rather than rote learning.

20. Teach systems of interpersonal relationships.

As McLean looks ahead twenty years, he predicts that teachers should:

1. Teach electronics and machine repair.

2. Abandon the teaching of shorthand and typewriting.

3. Teach with increasing emphasis on economics, financial management, law and so on.

4. Teach for leisure-time activities.

5. Broaden perspectives and values within the classroom.

6. Develop international curricula and perhaps learn a new international language.

7. Prepare to teach a wide range of students, especially within lifelong education.

8. Plan to teach abroad, especially in the third world countries.

9. Teach travel planning for interplanetary travel.

Summary and Conclusions

This paper is a review of the literature to reveal practices and trends in business education in Great Britain, the United States of America and Canada. Articles from which quotations were taken highlighted the most common practices and trends in business education. The most important findings follow.

Business education will be in greater demand in the high school and it will be extended downward into the elementary school and upward into the post-secondary institutes, especially in the areas of keyboarding and computer literacy.

In the subjects of law, economics, marketing, accounting and consumer education, the content taught needs to be business oriented and it must be taught by individuals qualified in the field of business.

Computer assisted instruction (CAI) is extending into all subject areas and should be used as an aid to instruction. Computing equipment must be available to assist in the delivery of this instruction by teachers in all subject areas including business education.

Business teachers should be involved in the in-service education, in keyboarding and computer literacy, of all teachers, including administrators and consultants.

The business education curriculum should be flexible and continuously updated to accommodate new technologies, changing content and the dynamic nature of business.

Current experience in business should be an on-going occurrence for teachers of business subjects. A co-operative business experience should be available as in-service education for business teachers through the co-operation of school administrators and business people.

The recommendations which follow summarize the information obtained from the review of the business education literature and reflect the position of the authors from Canada, Great Britain and the United States of America.

Recommendations

Keyboarding

1. The course title "Typewriting" as such should be removed from the curriculum and replaced by "Keyboarding" and "Word Processing".

2. Keyboarding should be taught by qualified business teachers to students at primary and elementary educational institutions.

3. Keyboarding should be taught at all levels with course content building and word processing aspects added as subject content requires it.

4. Most introductory keyboarding courses should be 15 to 20 hours in duration.

5. Expectations for keyboarding rate to be achieved should be a minimum level of a rate equal to the handwriting speed up to a rate equal to three times the handwriting speed.

6. Keyboarding should be taught on the computer or word processor keyboard.

7. Keyboarding equipment should be similar to that used in business. Hence, business teachers should not use blank keyboards on equipment at any educational level.

8. There should be one computer per child. Parents might be encouraged to purchase keyboards or inexpensive computer systems for their children. The children could take these with them as they progress through the school system. (Some universities are requiring students to purchase their own computers just as they would purchase their own textbooks). Keyboards encourage creativity and creativity cannot be turned on and off at will i.e. only when computers are available.

9. All teachers should receive an introductory course in touch keyboarding.

10. Administrators and consultants should have in-service experience in keyboarding.

Shorthand

11. Shorthand should be gradually de-emphasized with a close watch being kept on the demands of business.

Machine Transcription

12. Machine Transcription should be performed on a word processor or computer keyboard.

13. Dictation techniques should be taught to students at all levels to prepare them to input into voice media.

Computer Literacy

14. Computer Literacy should be taught by the business teacher; an elementary keyboarding course could be the first or second module of this course.

15. Administrators and consultants should have in-service experience in computer literacy and introductory programming.

Economics

16. Economics should be taught by the business educator and emphasis should be placed on economics in the business environment.

17. CAI and free access to databases should be available in teaching economics.

Communications

18. Communication and information systems are important. Voice entry into computers will be common in the near future. Business students should be taught to articulate clearly and concisely using modern day business language.

19. Administrators and consultants should have frequent communication with in-service educators and business people.

Computer Applications

20. Computer applications can be used at all levels of education providing the software or courseware is appropriate to the age level and ability level of the students.

Work Experience

21. Work experience should be built into the curriculum for all students at several points in their formal schooling.

Attitudes

22. Positive attitudes toward business technology need to be developed in students. This can best be done through observation and active participation in the routines of real work.

Handicapped

23. The handicapped, especially the physically handicapped, can benefit from business courses when the students are aided by the computer.

24. The mentally handicapped can also be assisted in becoming more self-sufficient and employable with the aid of the computer.

Gifted

25. The gifted students can be challenged and can become even more creative by using selected computer courseware.

Curriculum and Curriculum Development

26. Business people should be invited to act in an advisory capacity on curriculum committees.

27. Curricula of subjects such as accounting should be reviewed and revised to include modules on computer applications of spreadsheets, payroll, etc.

28. Since business students will have to communicate with the business environment and will need to work with attorneys, the business studies curriculum in law should more accurately reflect the language and content of business law.

29. The curriculum should be flexible and frequently evaluated and updated.

30. Business teachers (and other teachers) should be expected to use the curriculum guides as "guides" and should be encouraged to be creative when using them so that the content is kept up to date and reflects changes in business.

31. An active software and courseware evaluation committee should be set up in all subjects to recommend appropriate courseware for content as well as CAI and CMI.

32. The computer is used in business as a management tool. Management classes should be offered in the secondary curriculum utilizing the computer for case studies, etc.

33. Where necessary, obsolete business subjects should be removed from the program or revised to suit the requirements of present day business.

Teacher Development

34. Business teachers should receive an in-service course in psychology for children ages 6 through 13.

35. Business teachers (and teachers in other areas at all levels) should receive an in-service course in elementary programming in a language such as BASIC or LOGO.

36. An in-service work experience program should be provided to business teachers to update their skills and knowledge of present-day business practices.

37. Business educators should have an in-service one-semester work experience, probably occurring once every five years.

38. Business teachers should be sponsored to membership in organizations like AMS so that they make business contacts and keep abreast of current business practices.

39. The word "training" should be replaced by "education" because business teachers should be inspiring "thinking" and "creativity" rather than repetition of menial tasks.

40. Communication and information systems are important. Voice entry into computers will be common in the near future. Business students should be taught to articulate clearly and concisely using modern day business language.

41. Business teachers should provide "hands-on" experience for their students wherever it is appropriate and in all subject areas.

42. Business teachers should adopt an interdisciplinary approach in teaching business subjects.

43. Nonbusiness students should be encouraged to register in business subjects which will enhance their career goals.

44. Business teachers should be teachers of elementary, secondary, and postsecondary business subjects, especially in keyboarding and word processing.

45. Teachers should expect quality which is far more important than quantity e.g. keyboarding.

46. Critical thinking and the posing of questions which are "on target" should be part of the student's education.

47. Positive attitudes toward business technology need to be developed in business teachers. This can best be done through co-operative work experience while in-service.

48. Administrators and consultants should have in-service experience in keyboarding, computer literacy and introductory programs.

49. Methodologies should be revised and changed to suit the new content of business studies.

50. Computer studies requirements are being de-emphasized by business, and keyboarding and computer application knowledge are gaining emphasis. This trend should be incorporated in the secondary business studies program.

51. The three R's are not reading, writing and arithmetic. Computation is now the third R and includes skills in computing with present day technology i.e. the computer. Where calculators with microprocessors have replaced the electric mechanical calculators so will computers be used more and more for computaion. The computer should be utilized for problem-solving in business mathematics programs, accounting and solving problems in general business.

52. Databases should be available to business educators and the students should learn how to access them.

Appendices

The three appendices that follow contain excerpts from papers written by three authors which were not included in the body of the paper. They provide additional insights into the thoughts of the authors regarding the practices and trends in business education.

Appendix 1

Chantry-Price, Robert. "Office Technology--the Implications for Education and Training in the 1980's." BACIE Journal 1 Vol. 36 (1981): 27-28.

"Within the last two or three years word processors have started to become commonplace in offices. Their introduction is the foretaste of a period of considerable change which is likely to continue throughout the 1980's and into the following decade. Already the convergence of office machinery, computers and telecommunications is enabling manufacturers to produce a new generation of equipment so as to enable individual pieces of hardware, often separated by considerable distances, to communicate with each other. In those offices in which new equipment and systems are introduced its effect will be dramatic. In order to implement change successfully and thereby take advantage of the potential benefits which the investment in new equipment and systems will bring, it is essential that the appropriate education and training is made available to staff at all levels before, during and after change takes place. This includes not only those who will use the equipment but supervisory, administrative and managerial staff, together with those such as sales and technical staff for whom the use of office systems and equipment forms only an incidental part of their work.

"While there is no unique summary of the aims of business education, it is suggested that during the 1980's business education should aim to:

- prepare young people for a rapidly changing society
- assist them to be totally at home in a computer environment
- prepare them for jobs and tasks which will use advance technology and which are likely to change rapidly during the foreseeable future
- encourage them to acquire learning skills so as to enable them to benefit from continuing education and training

"To achieve these aims it is not necessary at this stage so much for the radical introduction of new subjects, but rather for modification, development and a change of emphasis within the framework of existing curricula. For instance, the skills, knowledge and concepts associated with word processing will need to be introduced, to varying extents, into courses for managers, clerical, secretarial and other office staff.

"The Study Group has identified four areas in which major change is required within the curricular framework of business education:

- the need for greater emphasis on skill in communication --this includes both literacy and numeracy

- the need for all students to receive basic training in keyboard skills since the QWERTY keyboard is likely to be the principal input device for many microprocessar based systems within the foreseeable future.

- the need to provide students with the opportunity to gain "hands on" experience in using computers and micro-processors some business studies students will require as much as five hours per week for this activity

- the need for improved careers education and guidance in order that students may take advantage of the fresh career opportunities that are emerging.

"Training for work in the clerical and secretarial fields will need to be restructured to include the changes outlined in the preceding paragraph and at the same time offer students a broader spectrum of skill and knowledge than has hitherto been the case.

"It will be necessary to re-balance the curriculum so as to include the following core subjects: communication skills in business, background to business, office practice and keyboarding. In addition, it will be necessary to provide specialist options in subjects such as secretarial duties, shorthand, typewriting, etc. These options will not necessarily need to be provided at the same level as that of the core.

"...the key factors involved in implementing change are the provision of in-service training and the acquisition of equipment.

"They have emphasised that each teaching institution should develop a corporate policy and strategy rather than allow individual departments to acquire equipment related to the needs of specific courses or groups of students.

"It is vital that this country should respond to change and provide the appropriate education and training. Time is short."

"The direction of change having been identified, teachers, administrators, policy makers and leaders of commerce and industry must act, and act quickly."

Appendix 2

A Statement by the Policies Commission for Business and Economic Education "This We Believe About the Future of Business Education." Business Education Forum 1 Vol. 41 (October 1986): 14-15.

"A futuristic approach to the development and/or revision of the business education curriculum is essential at every educational level. Therefore, we believe that the business education curriculum must--

- Reflect emerging technology such as voice-reproduction systems, electronic mail, networking, teleconferencing, and voice-activated equipment.

- Include such concepts as the electronic cottage, ergonomics, robotics, in the workplace, satellite communications, and expert systems and artificial intelligence

- Incorporate concepts that teach workers to function effectively in a high-tech environment.

- Reflect the ethical dimensions of such issues as computer security, software rights, copyright protection, information integrity, and invasion of privacy.

- Incorporate input from business and other community sources.

- Reflect the findings and implications of relevant research.

"In addition, we believe that the business education curriculum must reflect the impact of computers in the world of work and society in general. Therefore, technology literacy and keyboarding must be required of all students and must be taught by educators who are well trained in the specific methodology.

"Since the 'information explosion' and industry's demand for increased productivity require workers to meet higher expectations, we believe that the business education curriculum should include increasing emphasis on:

- Refining traditional communication skills of writing, speaking, listening, and reading.

- Expanding and improving computational skills.

- Identifying and solving problems.

- Developing critical thinking, reasoning, and decision-making skills.

- Improving and refining interpersonal skills."

"...we believe that the business education curriculum must continue to provide a strong foundation in such traditional areas as accounting, basic business, business communication, business law, consumer economics education, data and information processing, economics, management, marketing, and office support systems. These areas will continue to be an important part of the curriculum, although some will need to be presented using different delivery systems such as microcomputers, modular course offerings, interactive video, and software simulations.

"Because of the very rapid growth in entrepreneurship, we believe that the business curriculum must provide more opportunities to develop the knowledge and skills needed to establish and manage a business.

"...business educators must identify components of the business education curriculum that can be integrated into the total curriculum. We believe that business educators have many opportunities to develop new courses and enrich existing ones by using an inter-disciplinary approach. Business educators can become more active participants in the total academic process and thus improve the overall image of business education."

Appendix 3

Fothergill, R and Anderson, J. S. A. "Strategy for the Micro-electronics Education Programme (MEP)." Programmed Learning and Educational Technology 3 Vol. 18 (August 1981): 121-129.

"In developing a strategy for the Programme it has been assumed that:

1. schools should be encouraged to respond to these changes by amending the content and approach of individual subjects in the curriculum and, in some cases, by developing new topics;

2. with the dual aim of enriching the study of individual subjects and of familiarizing pupils with the use of the microcomputer itself, methods of teaching and learning should make use of the microcomputer and other equipment using microprocessors. This may be expected to add new and rewarding dimensions to the relationship between teacher and class or teacher and pupil;

3. use should be made of the microcomputer to develop the individual pupil's capacity for independent learning and information retrieval;

4. for those children with physical handicaps, new devices should be used to help them to adjust to their environment while those with mental handicaps should be encouraged and supported by computer programs and other learning systems which make use of the new technologies."

"In principle, software can be developed for computer-based learning across the curriculum, but the programme is giving priority to applications in mathematics, the sciences, craft (design technology, geography and courses related to business or clerical occupations."

"The second part of the territory with which the Programme is concerned is the introduction to new topics in the curriculum, either as separate disciplines or as new elements of existing subjects. The new topics...will include word processing and other 'electronic office' techniques."

"...the Programme will sponsor, where necessary, the production of teaching and learning materials in the following categories:

1. software and computer data bases, with appropriate documentation, for use with computers to teach the traditional curriculum;

2. resources for teaching the new topics, including documentation to improve the effective use of new equipment; and

3. items about the new technologies such as pamphlets, charts, etc.

"It is assumed that practising teachers will contribute to all curriculum development projects and project direction will need to demonstrate expertise in at least some areas of the work."

"Teachers require both information about microelectronics and professional skills to apply the technology effectively in the classroom. The training of teachers, both in-service and pre-service, must therefore be organized in such a way as to support the curriculum changes envisaged. Training is required at a number of levels:

1. courses aimed at improving general awareness and familiarization (of one to three day's duration...

2. short specialist familiarization courses (of up to one week's duration...

3. longer specialist courses(of up to three months' duration...aimed at teachers requiring additional training in particular fields...

Four in-service domains have been identified:

a. electronics and control technology.

b. the computer as an instrument (in computer studies ...in art and music).

c. computer-based learning (CAI, CMI, information retrieval...)

d. the 'electronic' office (word processing, data bases)."

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